ABSTRACT

VALIDATION OF THIN LAYER CHROMATOGRAPHY-DENSITOMETRY FOR IDENTIFICATION AND DETERMINATION OF GLUCOSAMINE IN SAMBAR DEER (*Cervus Unicolor)* ANTLER EXTRACT

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Validation of thin layer chromatography-densitometry for identification and determination of glucosamine in Sambar deer antler extract has been done. This study has purposed to obtain a valid thin layer chromatography-densitometry for identification and determination of Sambar deer antler extract. The selective separation of glucosamine (Rs = 1.71 and 4.86) was obtained by using 1-buthanol : glacial acetic acid : water (3:1:1) as mobile phase with nynhidrin as visualization reagents. Linearity test showed the linear relationship between glucosamine concentration and area (y = 2672.7x + 29212; r = 0.9952) in the range of concentration between 2.004 µg and 10.02 µg. The detection limit of glucosamine was 0.24 µg and quantification limit of glucosamine was found to be 0.77 µg. The accuracy test showed that the average percentage recovery of Sambar deer antler was 98.50%; whilst the precision was 1.69%. The proposed method was valid and fulfilled the validation requirements according to AOAC Guidelines and successfully applied for identification and determination of glucosamine in the sampel of Sambar deer antler extract (*Cervus unicolor*). The content of glucosamine in the sampels were found around 3%.

Keyword: Glucosamine, thin layer chromatography-densitometry, Sambar Deer Antler, *Cervus unicolor*.